

6 | LANDSCAPE



6.1 CHAPTER INTRODUCTION

A well designed urban landscape should define outdoor spaces, soften the public realm, and positively effect the environment, wellbeing, and safety. A landscape that changes with the seasons will add beauty and visual interest year round. Lush landscaping will provide people with a connection to nature which promotes relaxation and lowers stress. It should also bring the scale of a place to the pedestrian level and add value to adjacent properties. Trees and plants in an urban setting reduce storm water runoff, improve air quality, provide habitats for animals, and reduce the heat island effect. Landscaping should provide shade and act as a buffer from traffic, making a street feel more comfortable thus encouraging people to walk and gather outdoors rather than drive. Choosing the right plant palette, proper installation and soil volume, and on-going maintenance are all critical components for achieving the benefits of the landscaped environment within the Diamond District.

6.2 STREET TREES

The inclusion of consistently spaced street trees on both sides of the street are a priority for all streets within the Diamond District. They provide shade and beauty and act as a natural buffer between pedestrians in the Pedestrian Travel Zone and vehicular traffic in the Street Zone. Street trees also reduce the negative effects of urban heat islands. Street trees placed within the Buffer Zone and along pedestrian walkways in public gathering spaces help define the Pedestrian Travel Zones, providing a feeling of safety and comfort. Street trees can also have a traffic calming effect by slowing driving speeds and creating a visual wall that helps keep drivers on the road.

Design Standards

1. Street Trees shall be consistently spaced along the street within the Buffer Zone. The location of utilities shall be secondary to tree placement. When large street trees are used, they shall be spaced a minimum of 40-45 feet apart. Medium street trees shall be spaced 30-35 feet apart, and small street trees shall be spaced a minimum of 25 feet from each other. Adjustments in spacing is expected to accommodate for certain conditions such as drop inlets, underground utilities, pedestrian lights, signage, and driveway entrances/curb cuts, etc. Locations may have to be adjusted to provide adequate building access for fire trucks. Trees should not be planted within 25 feet of an intersection or 15 feet of a curb cut.



2. Street trees shall be appropriate for the street conditions they are placed within. When choosing a street tree, consider the adjacent land uses, the scale of adjacent buildings, the street width, the sidewalk width, available sunlight, the direction of the sun and shadows that will be cast, and the surrounding landscape, as well as the ultimate height, form, growing needs of the tree, and available soil volume.
3. When tree wells are used, street trees shall be centered in tree wells. When possible, street trees shall be at least 3 feet from the back of curb. Individual tree wells shall be a minimum of 6' x 10'. The use of tree grates over tree wells is prohibited.
4. Raised curbs around tree wells and planting strips are prohibited.
5. Tree wells and planting strips shall extend to the back of curb.
6. Use two different species of street trees that are of similar texture and form when planting along a single block face of a street. This is to create consistency and to maximize visual impact and prevent entire streetscapes of mono-cultures, which are more susceptible to impact from pests and diseases. A third street tree species may be used to highlight intersections or where circumstances may prohibit the use of the primary species (i.e. overhead utilities). Street tree species may vary by block.
7. Coordinate alignment between trees on both sides of the street and maintain that alignment as much as possible.
8. Street trees shall be chosen from the Street Tree Palette provided. Final plant selection must be approved by the City of Richmond.
9. Street trees must be drought tolerant, and wet foot tolerant. All plants listed on the Virginia Department of Conservation and Recreation Invasive Plant Species are prohibited.
10. Tree well surface shall be permeable and covered with mulch. If adequate soil volume is available, street trees may be combined with low level plantings such as hardy ground cover or grasses to help to soften the streetscape. Pea gravel is not permitted under street trees.
11. Street trees shall be planted along pedestrian circulation routes in public gathering spaces to the maximum extent practicable.
12. Choose smaller street trees from the plant palette where overhead utilities are present to prevent trees from impacting the utilities.

Street Tree Palette

- Aesculus hippocastanum (Horsechestnut)
- Betula nigra (River Birch)
- Fagus grandifolia (Beech)
- Ginko biloba (Ginkgo)
- Ilex opaca (American Holly)
- Liquidambar styraciflua ‘Rotundiloba’ (Fruitless Sweetgum)
- Magnolia accuminata (Cucumber Tree)
- Magnolia virginiana (Sweetbay Magnolia)
- Nyssa sylvatica (Tupelo)
- Parrotia persica (Persian Ironwood)
- Platanus acerifolia (London Planetree)
- Oak (all species)
- Tilia americana (American Linden)
- Tilia cordata (Littleleaf Linden)
- Ulmus americanus (American Elm)
- Ulmus parvifolia (Lacebark Elm)



Horsechestnut



River Birch



Beech



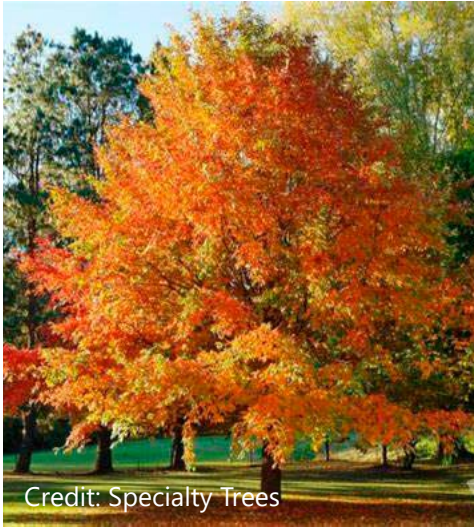
Ginko



Fruitless Sweetgum



Cucumber Tree



Tupelo Tree



Persian Ironwood



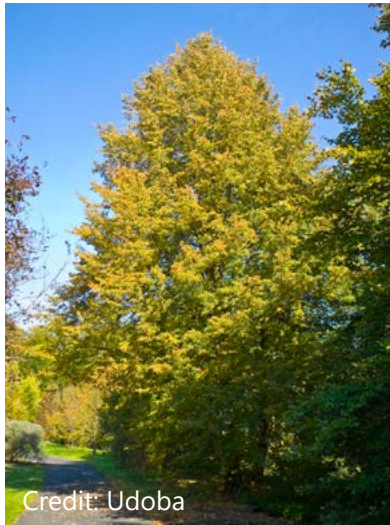
London Planetree



Oak Tree



American Linden



Littleleaf Linden



American Elm



Lacebark Elm



Low level plantings under street trees

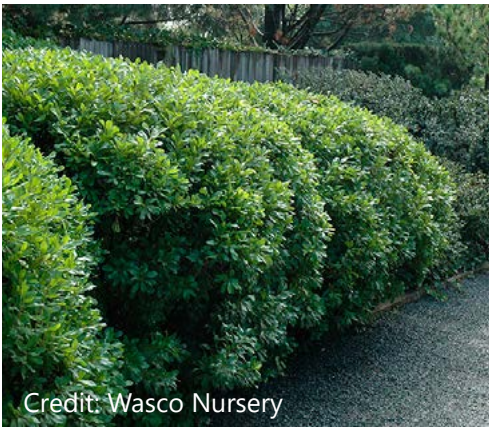
6.3 OTHER TREES & PLANTS

Besides street trees, additional landscaping in the Diamond District should be used to further enhance the street environment and define spaces or “rooms” within the public realm as places for gathering, playing, or just relaxing. Trees and plants should be used to provide shady areas of respite. Planted areas shall contain a diverse mix of plant species to add color and visual interest year round. Landscaping shall also be used to frame points of interest along the streetscape, and call attention to building entrances. A hierarchy of trees and plants should be used in planting beds to provide texture and dimension, Including deciduous trees, evergreen trees, shrubs, perennials and ground cover.

Design Strategies

1. Where space allows, landscaping in the Frontage Zone is encouraged whether in raised planters or planting beds. Trees and plants shall be used to identify building entrances, provide shade for outdoor dining, and further define the Pedestrian Travel Zone.
2. In addition to street trees, shrubs, perennials, and ground cover may be used in the Buffer Zone to further delineate the Pedestrian Travel Zone, add beauty to the street, and define gathering spaces where their is sufficient space.
3. Trees, shrubs, perennials, and ground cover shall be grouped together in well composed planting beds rather than in individual, scattered locations. Landscaping shall include a diverse palette of plant species.
4. Planting palettes shall be developed that provide year round beauty and visual interest. The plant palette shall be appropriate for the growing conditions of the space (i.e. shade/full sun, drought tolerant, etc). Priority shall be given to native and pollinator friendly species. Multiple palettes shall be developed, to allow for a variety of case conditions and high diversity of species used.
5. Similar yet alternating palettes of tree and plant species shall be planted along the length of a block for consistency and to maximize visual impact. Avoid entire streetscapes of mono-cultures, which would be more susceptible to impact from pests and diseases.
6. Trees and plants shall be appropriate for the street conditions they are placed within. When choosing a plant palette, consider the adjacent land uses, the scale of adjacent buildings, the street width, the sidewalk width, available sunlight, the direction of the sun and shadows cast, and the surrounding landscape, a well as the ultimate height, form, and growing needs of the selected trees and plants.
7. Trees and plants shall be chosen from the Plant Palettes provided. Final plant selection must be approved by the City of Richmond.

8. Trees and plants must be drought tolerant, and wet foot tolerant. All plants listed on the Virginia Department of Conservation and Recreation Invasive Plant Species are prohibited.
9. Plant materials shall be adaptable to existing soils, climatic and lighting conditions, and be disease resistant.
10. Edible landscaping may be used near residential uses.
11. Large and medium evergreen trees may be used for screening or as a consistent background with deciduous trees and plants planted in the foreground. See section 7.9 Screen & Fencing for further information.
12. Trees selected from the Tree Palette provided shall be used instead of street trees in medians and roundabouts when appropriate. Final plant selection must be approved by the City of Richmond.
13. Large areas of mulch without plant material are prohibited.
14. Landscaping placed within site triangles at intersections must not exceed 12 inches in height.
15. The use of edible landscaping may be used where appropriate.
16. Landscaping shall allow for surveillance and policing activities. Avoid using high hedges and landscaping that block visibility.



Tree Palette (not street trees)

- Carpinus betulus (European Hornbeam)
- Carpinus caroliniana (American Hornbeam)
- Cercis canadensis (Eastern Redbud)
- Chionanthus virginicus (White Fringetree)
- Cornus kousa (Kousa Dogwood)
- Crataegus (Hawthorne)
- Halesia caroliniana (Carolina Silverbell)
- Magnolia grandiflora (Southern Magnolia)
- Magnolia x soulangeana (Sweetbay Magnolia)
- Prunus serrulata / Prunus yedoensis (Ornamental Cherry)

Shrubs Palette

- Callicarpa americana (American beauty berry)
- Ceanothus americanus (new Jersey tea)
- Cornus sericea (Red twig dogwood)
- Euonymus americanus (heart’s-a-bustin’)
- Ilex glabra (inkberry)
- Ilex vomitoria (yaupon)
- Itea virginica (Virginia sweetspire)
- Juniperus horizontalis (creeping juniper)
- Morella cerifera (Wax Myrtle)
- Viburnum acerfolium (maple-leaved viburnum)
- Viburnum dentatum (Arrow-wood Viburnum)
- Viburnum prunifolium (Black Haw Viburnum)

Forbs Palette

- Achillea millefolium (yarrow)
- Agastache rugosa (Butterfly mint)
- Amsonia illustris (Ozark bluster)
- Asclepias syriaca (common milkweed)
- Asclepias tuberosa (butterfly weed)
- Aquilegia canadensis (columbine)
- Baptisia australis (false indigo)
- Coreopsis tinctoria (plains coreopsis)
- Coreopsis verticillata (threadleaf coreopsis)
- Conoclinium coelestinum (blue mistflower)
- Eutrochium fistulosum (hollow Joe-pye weed)
- Heliopsis helianthoides (smooth Oxeye)
- Heuchera (coral bells)
- Hypericum prolificum (St John’s-wort)
- Liatris Pilosa (gayfeather blazing star)
- Liatris spicata (dense blazing star)
- Monarda fitulosa (wild bergamot)
- Phlox divaricate (woodland phlox)
- Pycnanthemum muticum (clustered mountain mint)
- Pycnanthemum tenuifolium (narrow-leaf mountain mint)
- Rudbeckia fulgida (orange coneflower)
- Rudbeckia hirta (black-eyed susan)
- Salvia lyrate (lyre-leaf sage)
- Symphyotrichum novae-angliae (New England Aster)
- Symphyotrichum novi-belgii (New York Aster)
- Verbena hastata (Blue Vervain)
- Vernonia noveboracensis (New York Ironweed)
- Waldsteinia fragarioides (barren strawberry)
- Yucca filamentosa (common yucca)
- Zizia aurea (golden Alexanders)

Vines Palette

- Gelsemium sempervirens (Carolina jessamine)
- Lonicera sempervirens (coral honeysuckle)

Ferns Palette

- Dryopteris marginalis (marginal wood fern)
- Polystichum acrostichoides (Christmas Fern)

Grasses Palette

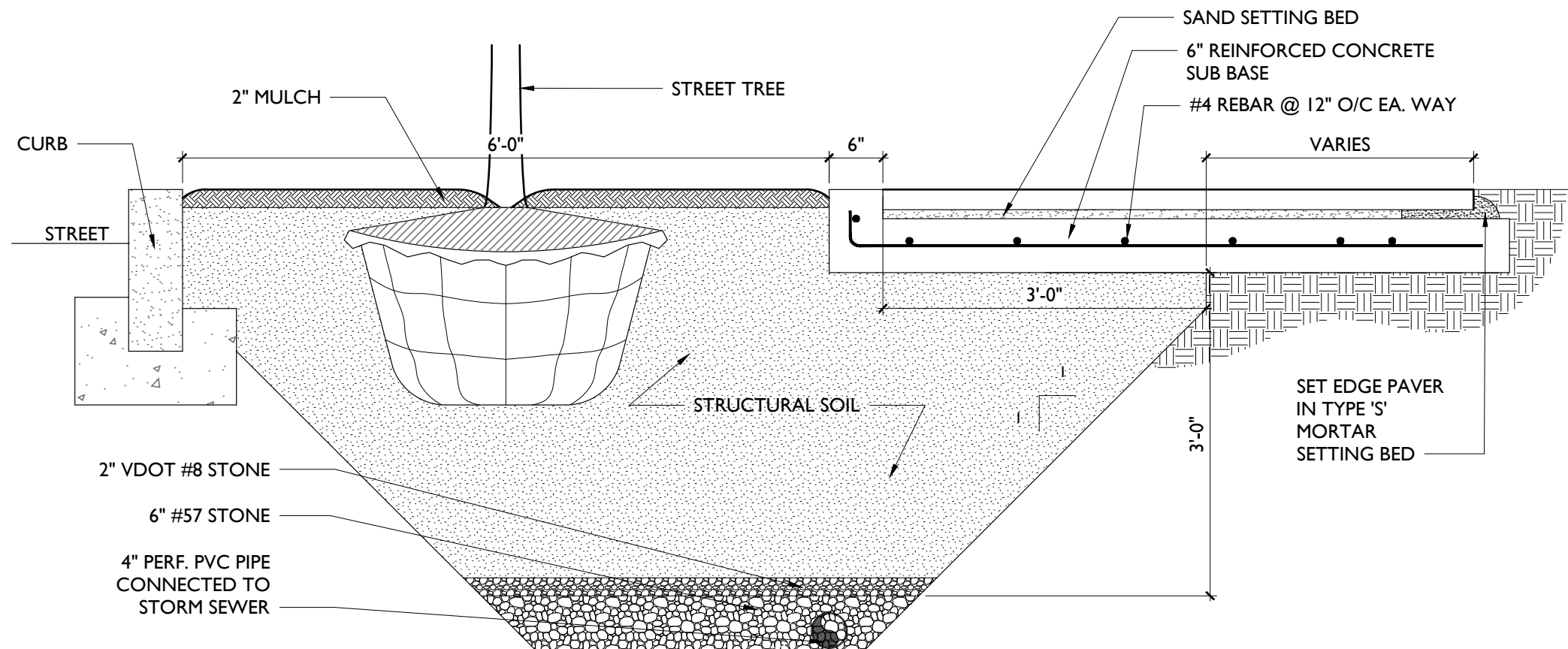
- Andropogon ternarius (splitbead bluestem)
- Eragrostis spectabilis (purple love grass)
- Panicum virgatum (switchgrass)
- Muhlenbergia capillaris (muhly grass)
- Schizachyrium scoparium (little bluestem)
- Chasmanthium latifolium (river oats)

6.4 PLANTING & INSTALLATION DETAILS

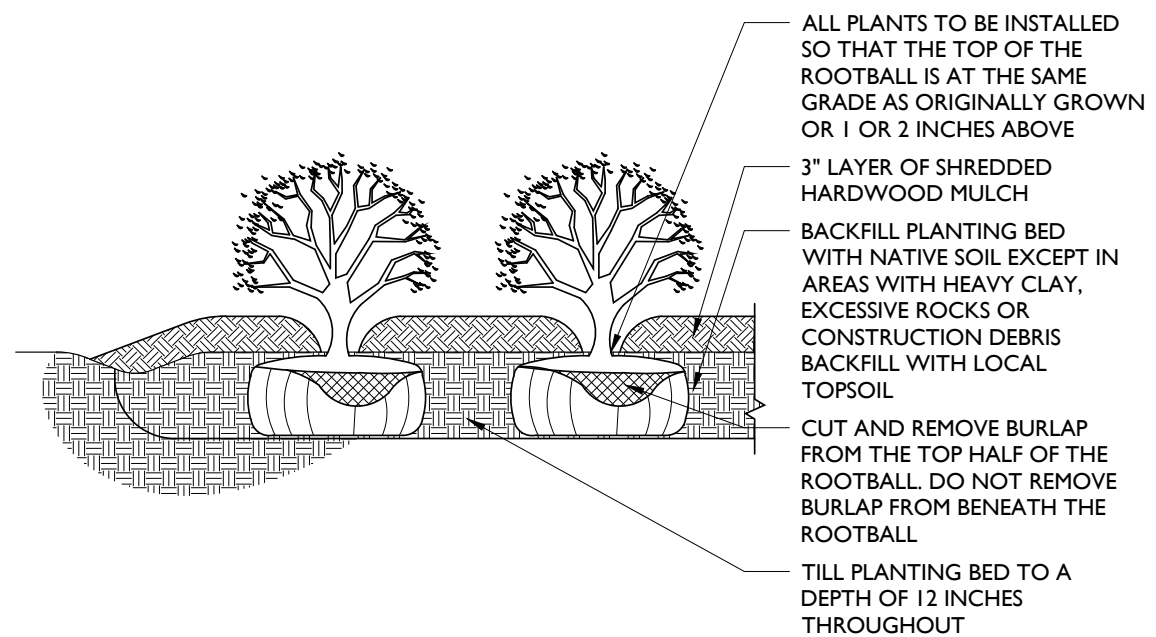
Design Standards

1. Soil volumes for tree wells should range from a minimum of 45 cubic feet (CF) for smaller trees with a required 3' depth, to a minimum of 180 CF for larger trees.
2. A continuous tree trench should be used whenever possible to provide the most CF of soil, with a required 3' depth and minimum width of 6'
3. Tree wells shall be at least 6' x 10' unless otherwise noted.
4. Cantilevered (suspended) pavement system or a structural soil cell systems shall be used for all tree wells.
5. Tree wells should be fully excavated and backfilled with clean, debris free soil to ensure maximum tree viability.
6. The design of new tree wells shall incorporate stormwater BMP infrastructure, such as bioretention basins, bioswales, curb cuts, etc.
7. Hard ground cover such as gravel or pavers is not permitted in tree wells.
8. Street trees shall be 2 1/2" caliper at the time of planting.
9. Structural soils shall be used when trees are surrounded by hardscape.
10. Planting beds shall be mulched with a 2 or 3-inch layer of brown shredded bark except where shrub and ground cover plants provide a solid mass.
11. Automatic drip irrigation shall be provided whenever possible, particularly when ideal planting conditions cannot be met. A drip ring design is preferable over a flood bubbler design to reduce risk of root disease issues. All irrigation systems shall be commercial grade equipment and piping. Systems shall be provided with soil moisture sensors and rain check gauges to prevent unnecessary water use. Backflow preventers and controllers shall be screened from public view. All irrigation systems shall have controllers which automatically turn the system on and off. All irrigation systems shall be installed by qualified irrigation contractors. Zones shall be provided that account for the varying water needs of different plant types, species, and lawn areas.

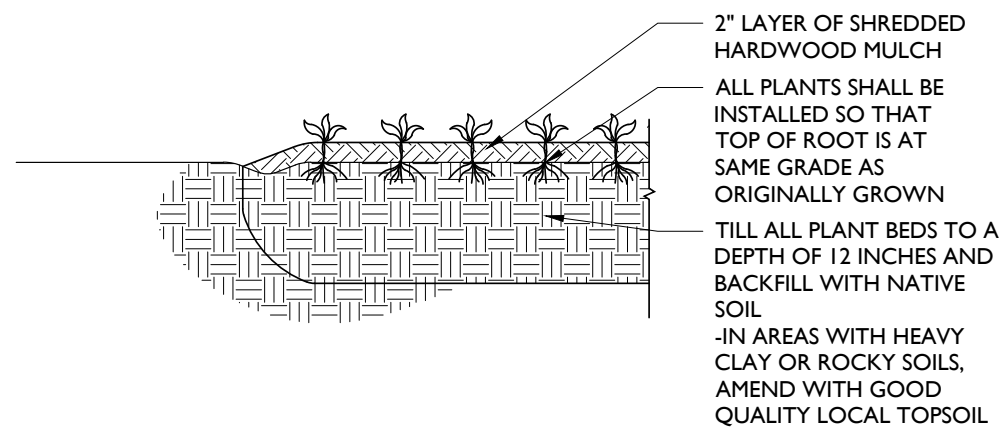
Cantilevered Tree Well System



Shrub Planting Detail



Ground Cover Planting Detail



Structural Soil Cell System



6.5 TURF GRASS LAWN AREAS

Turf lawns can provide wide open spaces for play, relaxation, people watching, sports, and gathering for a picnic. Turf lawns may be found in limited instances within the public realm of the Diamond District.

Design Standards

- 1. The use of turf grass shall be limited to larger, contiguous areas meant for recreation. Turf grass is not permitted in the Sidewalk Zone or medians.
- 2. Structural soils shall be used for all turf grass areas.
- 3. Turf grass lawns shall be cool season varieties such as Tall Fescue, Kentucky Bluegrass, or a blend. The use of warm season grasses for lawn areas is discouraged.
- 4. Where turf grass is used, it is required to be sod.
- 5. Turf grass shall be irrigated.
- 6. The use of synthetic turf may be permitted with City approval in specific limited instances such as play areas. Synthetic turf should be green.
- 7. Turf grass lawns shall be broken up by pedestrian and bicycle paths and areas of landscaping to provide access to the lawn, occasional shade, frame views and add color and visual interest.

6.6 MAINTENANCE

Proper maintenance of all landscaped areas is critical for ensuring healthy tree and plant growth and for achieving the benefits the landscaped environment will bring to the Diamond District.

Design Standards

- 1. A maintenance plan that specifies the entity responsible for upkeep shall be provided with all street trees plantings and landscaping.
- 2. All tree pruning shall be conducted under the supervision of a certified arborist.
- 3. Hazardous, dead, or dying trees shall be removed and replaced.
- 4. Trees shall be trimmed to maintain a vertical clearance of 14-feet where they extend over a roadway and 80 inches where they extend over sidewalks.
- 5. Trees and shrubs shall be trimmed to maintain a 10’ overhead clearance where they extend over bike paths.
- 6. Trees shall be pruned to maintain a 6-foot clearance from any street light.
- 7. Trees shall be pruned to maintain a 2-foot clearance from any building facade and building signage.
- 8. Re-mulch as needed to maintain the appropriate layer of brown shredded bark mulch in mulch beds.
- 9. Turf grass lawns shall be mowed on a regular basis so as not to exceed 3-inches in height.
- 10. Turf grass lawns shall be aerated and seeded every fall.
- 11. Irrigation systems shall be maintained in proper working order.
- 12. If a maintenance plan includes pest and weed control, only organic, chemical-free treatments shall be utilized.
- 13. De-icing can negatively effect tree health. De-icing methods that have the least impact on tree growth shall be used.

7 | SITE FURNISHINGS & AMENITIES

Credit: F11photo | Adobe Stock

7.1 INTRODUCTION

The integration of site furnishings and amenities plays a pivotal role in enhancing the functionality, aesthetics, and overall user experience of the public realm. These elements, which range from benches, waste receptacles, and lighting fixtures to bicycle racks, planters, and informational kiosks, are fundamental components that contribute to the livability and appeal of urban environments. Site furnishings can transform the public realm into vibrant, welcoming outdoor rooms that encourage community interaction, promote sustainability, and reflect the unique character of the Diamond District.

7.2 GENERAL DESIGN STANDARDS

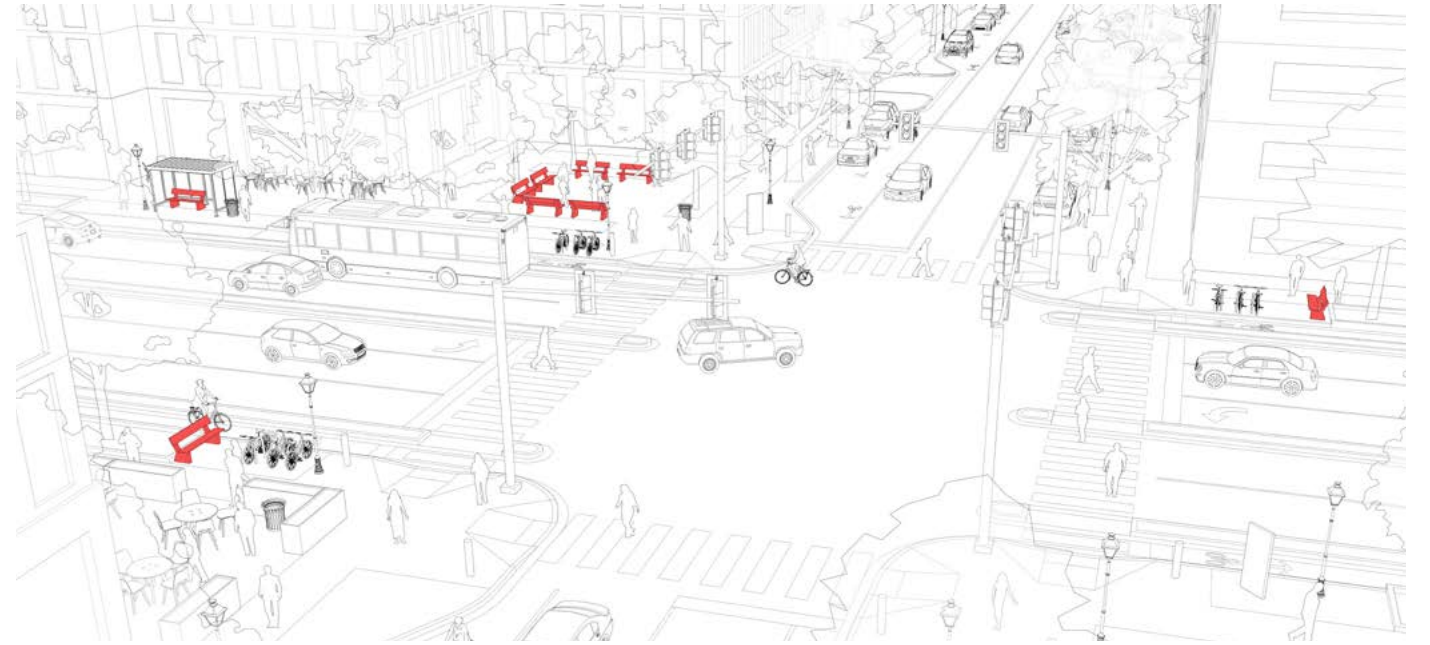
1. Site furnishings shall be located where people congregate, such as at bus stops, along mixed use streets, in front of major attractions such as the ballpark, and in public gathering spaces and recreation areas.
2. The placement of site furnishings should not create visual clutter in the public realm. Furnishings may be grouped together, where appropriate.
3. Site furnishings shall be appropriately styled and scaled to complement building architecture and to reinforce the character of the public realm.
4. Site furnishings may also be integrated into a site design as part of the proposed architecture, such as walls and steps used as seating.
5. Unless otherwise specified, furnishings shall be metal, wood, or resin, appropriate for outdoor use.
6. All exposed metals shall be coated or otherwise treated to withstand oxidation/ corrosion, abrasion, and damage from airborne salts.
7. Wood shall be Forest Stewardship Council (FSC) certified. The use of wood from the “Red List” is not permitted. Avoid the use of treated lumber except where necessary.
8. Choose low carbon, low VOC materials.
9. Use recycled materials as often as possible
10. Use locally sources materials when possible.
11. Site furnishings shall have vandal-resistant features. Replacement parts or components shall be readily available and easily installed. Finish colors shall be easily matched.
12. Site furnishings and amenities shall be durable and low maintenance.

7.3 SEATING

Seating is an essential component of the public realm. It should be not only functional, but add to the overall aesthetic. Seating provides a place of respite in the urban environment, as well as a place to socialize or gather for a meal or snack. Properly places seating can help define rooms within the public realm and contribute to a vibrant street life.

Design Standards

1. A variety of seating options shall be provided, from benches that seat just a few people to tables and chairs for larger groups, to swings or lounge type seating. Creative design of seating is encouraged including incorporating seating that functions as permanent sculptural structures in the landscape. Low walls and even grass or turf mounds may be used as seating. Low walls used for seating purposes should be 18 to 24 inches high and a minimum of 18 inches deep.
2. Seating shall be provided at transit stops, entrances to major buildings, at the entry points to parking structures, near vendor kiosks, and at significant views and points of interest. Along mixed use streets, seating clusters shall be spaced no further than 90 feet apart. On residential streets, there shall be a minimum of one seating cluster per block.
3. Seating in the Buffer Zone must be permanently fixed to the ground. Moveable seating, such as tables and chairs that can be reconfigured, may be installed in public gathering spaces.
4. Outdoor seating areas affiliated with private dining establishments is encouraged. Such seating that encroaches into the public right-of-way must comply with all applicable city regulations.
5. Seating shall be constructed primarily of metal or wood. Metal shall be matte or glossy powder-coated. High quality composite wood materials may be used. Wood shall be a natural color or stained, not painted. Wherever possible, street furnishings should be of a contrasting color to the sidewalk to aid pedestrians with visual impairments. Wood shall be FSC certified.
6. Environmental factors such as sunlight, shadow, glare reflection, wind, and rain should be considered in the placement of seating areas. Seating shall be provided in shady areas as well as sunny locations.
7. Seating areas must be sufficiently illuminated. Seating shall not be placed in areas that are hidden from view.
8. Seating should be comfortable and have a backrest and arms whenever possible. Tables may have umbrellas made of durable, stain resistant material. Seating areas that are not located in the Sidewalk Zone may have trellises or other covering made of durable materials.



Creative Seating Options



Acceptable Metal Bench Specifications:

This bench can be placed throughout the public realm.

Manufacturer: Landscape Forms

Model: Parc Vue Bench, Backed Arms

Color: Gloss Black

Length: 6 ft.



Credit: Landscape Forms

Acceptable Wood Bench Specifications:

This bench can be placed throughout the public realm outside of the Buffer Zone

Manufacturer: Landscape Forms

Model: Neoliviano Bench, Backed Arms

Materials: Aluminum and Domestically Sourced, Thermally Modified Ash

Length: 69"



Credit: Landscape Forms



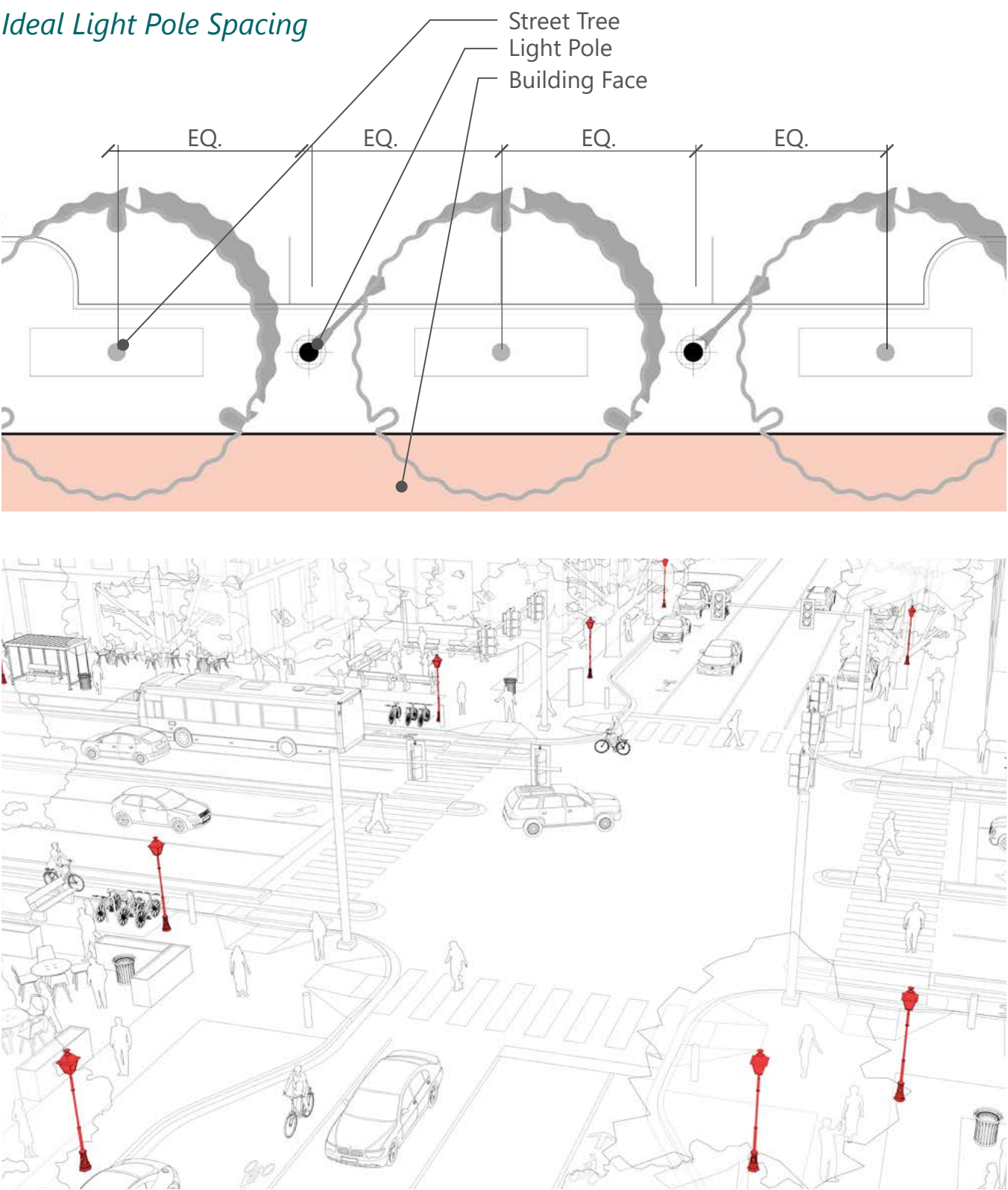
Credit: Landscape Forms

7.4 LIGHTING

Lighting helps visually define an urban environment at night. Lighting in the Diamond District will include pedestrian scale lighting to illuminate and define pedestrian circulation routes, streetlights to illuminate roadways, and lighting to illuminate landscaping or other site features.

Design Standards

1. Consistent levels of illumination shall be maintained in public areas. Safe and comfortable circulation depends more on the consistency of illumination than on the level or brightness of the lighting.
2. All lighting fixtures should comply with International Dark-Sky standards. Use only full cut-off fixtures. Uplighting is not permitted.
3. The color temperature of a light source shall not exceed 3000K. High pressure sodium lighting is not permitted. LED lighting is required.
4. Lighting shall incorporate aspects of Smart Cities technologies whenever possible. Solar lighting is strongly encouraged.
5. On major streets, such as N. Arthur Ashe Boulevard, Robin Hood Road, and Hermitage Road, pole mounted streetlights shall be used to illuminate the street. Streetlights shall be mounted at a height of 25 feet and located centrally within the Buffer Zone. Where pole mounted street lights are used, pedestrian-scaled lighting shall also be provided to illuminate the Sidewalk Zone. Pedestrian scale lighting may be mounted on the same pole or on its own pole at a height of approximately 15 feet.
6. On streets that don't require pole mounted streetlights, pedestrian scale light poles shall be installed at regular intervals. Lighting shall be mounted at a height of approximately 15 feet and located centrally in the Buffer Zone. Pedestrian scale light poles shall also be installed at regular intervals along pedestrian circulation routes within gathering spaces. Lighting shall be mounted at a height of approximately 15 feet.
7. Pedestrian scale light poles shall be placed 40 to 60 feet apart, depending on the desired light level and the photometric characteristics of the light fixture.
8. The location of street trees may affect the consistency of illumination along the streetscape. The distance between a street tree and a street light will depend on the type of light. Generally, the center of a street tree should be no closer than 10 feet from a streetlight.
9. If lighted bollards are used, they shall not exceed an overall height of 42 inches. Bollards may also be internally lit, reinforcing the visual separation of pedestrians, bicycle, and vehicular routes. Bollards shall be metal or textured concrete, stone, or a combination of these materials.
10. All electrical wiring for site lighting shall be underground.
11. All street light and pedestrian light poles shall include banner equipment.
12. Transformers shall be located in inconspicuous areas away from site and building entrances and screened.
13. Integrate solar options for outdoor lighting where feasible.



Acceptable Streetlight Specifications:

Streetlight

Manufacturer: Lumec by Signify

Model: Roadway RoadFocus LED RFM
Cobrahead (medium)

LED Module: 160W 48LED

Color Temperature: 3000K

Height: 29 ft.

Color: Black



Acceptable Pedestrian Light Specifications:

Pedestrian Light

Manufacturer: Ligman Lighting

Model: Steamer Street USE-90002

LED Module: 80 W LED

Color Temperature: 3000K

Height: 14 ft

Color: Black (BLK)



7.5 SIGNAGE & WAYFINDING

Signage in the public realm conveys information about a community as a whole. The types of signs typically found in the public realm are: wayfinding signage and street signs to help people navigate, interpretive signs to educate, banners to celebrate a community or community event, and gateway features and neighborhood markers to define a neighborhood’s edges and call attention to special spaces or areas within a community. Public signage can help provide a recognizable identity and a unified character for a place.

General Signage Design Standards

- 1. Signage should be visually comprehensive and clear with concise messaging. Font size should be clearly legible for the purpose the sign serves.
- 2. Signage throughout the Diamond District should be a unifying element. The use of the same font styles or complementarily font styles and color schemes on all signage is encourage. Avoid unusual or over-embellished fonts that are difficult to read.
- 3. Signage should be able to withstand weather conditions and should be constructed from durable materials and replaced as needed to maintain a high quality appearance.
- 4. Signage shall be clearly visible.
- 5. The area around signs may be landscaped provided that plantings do not obscure the sign or in the case of wayfinding signage, prevent access to the sign.
- 6. A Diamond District community logo shall be incorporated into all public banners and wayfinding signage.
- 7. Refer to the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) for criteria on traffic control devices, including signage.

Wayfinding Design Standards

- 1. Wayfinding shall generally conform to the City’s existing wayfinding program, previously approved by the Planning Commission, but shall include any related specific branding developed for the Diamond District and may include elements unique to the District. The full wayfinding package shall be approved by the Planning Commission.
- 2. Wayfinding systems informs people about where they are and what is in their surroundings. Wayfinding may include text base signage, directional help, maps, and other graphics designed to help visitors navigate the Diamond District.
- 3. Pedestrian oriented wayfinding signage should be placed at regular intervals throughout the Diamond District, especially near transit stops, parking decks, and significant features, such as the ballpark and linear park. Signage should be located in the Buffer Zone or along pedestrians circulation routes within public gathering spaces.
- 4. When possible, the signage should be interactive and allow one to access online information with up to-date details on events and other relevant activities taking place in the Diamond District.
- 5. Pedestrian oriented wayfinding signage should not exceed (6) square feet.
- 6. Vehicular oriented wayfinding signage should be directional in nature, directing visitors to significant locations within the Diamond District, such as the ballpark or linear park. Text should be minimal, clear, and legible from a moving vehicle.
- 7. Wayfinding and signage cannot interfere with Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) signs.
- 8. Central points of entrance shall have wayfinding station with map.
- 9. Signage for the baseball stadium and primary stadium parking garage shall be the same throughout the Diamond District and surrounding streets.

Wayfinding Signage



Credit: Transportation Options



Credit: Your Municipality



Credit: Ashton Design



Credit: Google Maps



Credit: Town of Lincoln

Interpretive Signage



Credit: Minneapolis Parks



Credit: Charnwood Borough Council

Interpretive Signage

Interpretive signs shall be installed throughout the public realm to educate users about historical events, sustainability strategies in use, natural or landscaped features, and construction techniques. Interpretive signs should be subtle in nature so as to not interfere with the thing they are communicating about.

Banners

- 1. Banners must comply with the City’s Urban Design Guidelines and the Banner Display Program.
- 2. Banners shall only be used to market the Diamond District as a whole or advertise an event taking place within the Diamond District. Banner design should celebrate and promote the Diamond District and convey the community’s identity.
- 3. The lowest point of any banner or mounting hardware must not be less than 12 feet above the ground level.
- 4. All street light and pedestrian light poles shall include banner equipment.

Gateway Features & Neighborhood Markers

- 1. Gateways into the Diamond District can be denoted through the use of signage, distinct landscaping, art, and other visual elements.
- 2. Gateway design may differ at different gateways, but should be complimentary to each other.
- 3. Gateway features may be placed in medians. Signage must not impede visibility and must adhere to all applicable codes and ordinances.
- 4. Gateway features and text should be clearly visible to pedestrians, bicyclists, and those in a moving vehicle.
- 5. Neighborhood markers shall mark specific places within the Diamond District, such as the ballpark or linear park. All neighborhood markers shall be similar in style and shall be placed at ground level or on poles. Neighborhood markers are not directional in nature, but simply announce that one has arrived in a specific place.

Banners



Gateway Features & Neighborhood Markers



7.6 MICROMOBILITY AMENITIES: BICYCLES, E-BIKES, SCOOTERS, ETC.

Micromobility amenities are an essential component of the circulation network in the Diamond District. With the number of micromobility users in the City ever increasing, these amenities are an important public realm feature that make micromobility a more viable form of transportation.

Design Standards

1. **Landscape Forms ‘Ride’ Bike Rack** shall be the bicycle rack specified throughout the Diamond District.
2. Bicycle racks and bike repair stations shall be placed in locations that are easily visible both to encourage use and for security.
3. Appropriate locations for bicycle parking and bike share parking shall be identified early in the design process so that they are properly integrated into the design of the site. Bicycle racks shall be provided along bicycle facilities and near transit stops. Bicycle racks located in the Sidewalk Zone shall be placed within Buffer Zone or Frontage Zone. A minimum of two bike racks shall be provided on both sides of the street on each block.
4. Bicycle racks shall be located a minimum of 2 feet from the curb face to avoid ‘dooring.’ Bicycle racks shall be placed at least 5 feet from fire hydrants and crosswalks; 4 feet from loading zones, transit stops, and benches; and a minimum of 3 feet from parking meters, newspaper racks, mailboxes, light poles, sign poles, and other street furniture. In all cases the length of typical bicycle (70 inches) shall be considered. Bicycle racks shall be spaced minimum 3 feet apart
5. Bicycle racks shall be able to withstand hacksaws and hammers. They shall also be resistant to rusting and bending or deformation. Racks shall be securely anchored to the ground.
6. Whenever possible, bicycle racks shall be covered or located where they are protected from the weather.
7. Bicycle racks shall support the bicycle in at least two places, preventing it from falling over and allow locking of the frame and one or both wheels with a U-lock.
8. At least one bike repair station shall be placed in the Diamond District in the linear park close to the new stadium. The location of bike repairs stations may be indicated on wayfinding signage.
9. At least one e-bike charging station shall be located in the Diamond District. A solar powered e-bike charging station may be installed.
10. Dedicated micromobility parking for scooters shall be located near the stadium.
11. A large bike parking location that provides bike racks to accommodate 200 bikes shall be provided adjacent to the stadium for stadium attendees. See 4.7 Public Gathering Space considerations.



Credit: All 4 Cycling

Bike Repair Station



Credit: National Association of City Transportation Officials

E-bike Charging Stations

Acceptable Bike Rack Specifications:

Manufacturer: Landscape Forms

Model: ‘Ride’ Bike Rack, Metro40 collection

Height: In-ground embed

Color: Silver Metallic



Credit: Landscape Forms



Credit: Landscape Forms



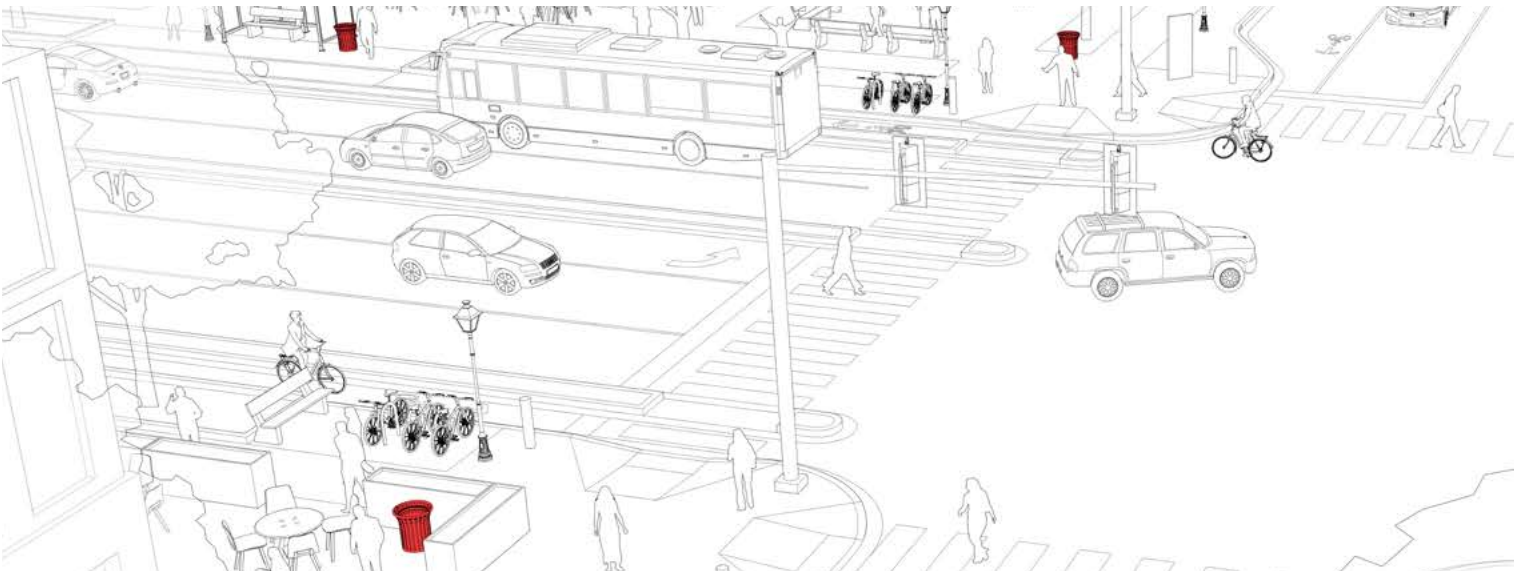
Credit: Landscape Forms

7.7 WASTE RECEPTACLES

Trash receptacles placed throughout the public realm will help keep the Diamond District free of litter. Recycling and compost receptacles will help encourage sustainable practices.

Design Standards

- 1. Trash and Recycling receptacles shall always be placed together.
- 2. Trash and recycling receptacles shall be located throughout the Diamond District primarily in the Buffer Zone and in public gathering spaces. They shall be visible and conveniently located for pedestrians. On mixed-use streets, they shall be located in high activity areas such as near seating areas, transit stops, and at street corners. On Neighborhood Residential Streets and Linear Park Streets, trash and recycling receptacles shall be placed at street corners. In public gathering spaces, they shall be placed near seating areas.
- 3. Compost receptacles shall be located at strategically selected locations chosen by the Department of Public Works and the Office of Sustainability, in alignment with the City’s current Composting Program. Other locations for compost receptacles shall be determined in coordination with the City of Richmond Department of Parks, Recreation and Community Facilities.
- 4. Waste receptacles shall be constructed of durable, high-quality metal such as galvanized steel or cast aluminum. Materials shall be powder-coated to match colors of other furnishings. Recycling receptacles shall be blue or green to distinguish them from the adjacent trash receptacle. Compost receptacles shall be purple.
- 5. Trash receptacles shall consist of an outer decorative shell and a replaceable, impact-resistant liner.
- 6. Waste receptacles shall be permanently fixed to the ground.
- 7. Receptacles shall have a rain guard over the main opening.
- 8. Receptacles shall be clearly labeled “trash”, “recycle”, and “compost”.



Acceptable Waste Receptacle Specifications:

Manufacturer: Landscape Forms

Model: Chase Park Litter

Option: Side Opening

Color: Matte Black for Trash
Loll Sky Blue for Recycling



7.8 BOLLARDS & PLANTERS

Bollards and planters introduce plants and decorative and safety elements that can complement the public realm and help define spaces. Lighted bollards can provided an added safely measure at night. Planters offer an opportunity to present vegetation together with architectural detailing. They may also be used to provide privacy for outdoor diners, separating eating areas from pedestrian circulation.

Design Standards

1. Bollards shall be constructed of durable materials and complement the surrounding architectural character.
2. Bollards shall be cylindrical with a flat top. They shall be quality metal with a durable finish in black.
3. Bollards must not exceed 40 inches in height. Lighted bollards can provide an added safety measure at night. Bollards shall be K-rated.
4. Where street trees cannot be provided in an area of the Buffer Zone, the use of bollards or reinforced planters shall be considered. Bollards shall not be placed in tree wells.
5. Bollards may be installed along shared use paths or bike paths near intersections with vehicular traffic.
6. Removable or retractable bollards are preferred and may be installed where they are intended for intermittent use, such as in multi-functional spaces and on the Festival Street.
7. The use of planters is encouraged at the following Frontage Zone locations: along individual storefronts, perimeter railings of outdoor cafes and dining areas, and at entrances to significant buildings.
8. Planters in the public realm must use plants from the plant palette. Planters may be free standing or fixed. Appropriate planting materials for planters includes perennials, ornamental grasses, small evergreen trees, and/or small shrubs. Annuals and other high maintenance landscape materials are not permitted.
9. Planters shall be easy to maintain and of durable material such as stone, freeze proof clay, decorative finished concrete, metal, or appropriate combinations thereof. Treated wood and plastic materials are not permitted.



Black cylindrical bollard with flat top



Lighted black cylindrical bollard with flat top



Credit: City of Concord



Credit: Wybone

7.9 SCREENING & FENCING

Screening and fencing may be used from time to time in the public realm of the Diamond District to screen unsightly objects. Decorative fencing may be to define a sidewalk cafe per the City’s Sidewalk Cafe Ordinance.

Design Standards

- 1. Mechanical item and dumpsters are required by zoning to be screened from view of the public right-of-way. Walls or fences that screen such devices shall be visually opaque.
- 2. Screening material shall be a masonry wall with a black metal gate for dumpsters and larger mechanical items. Additional evergreen landscaping shall be provided where space permits. Gates shall have a steel framework attached to steel posts and shall be covered in such a manner so as not to be visible from public view or designed in an attractive manner.
- 3. Smaller items may be screened by evergreen landscaping planted at an interval to fully block the item from view. Vertical gardens and green walls may be used in addition to or in place of evergreen landscaping provided that they fully block the item from view.
- 4. Chain link fencing is not permitted in the Diamond District except along the rear of the stadium parcel. If provided, the entire structure (fabric, posts and railings) shall be coated with a dark colored vinyl, preferably black, and supplemented with sufficient evergreen landscaping.
- 5. Barbed wire, razor wire, or similar fencing is not permitted.
- 6. Vinyl fencing is not permitted.
- 7. Barriers or fencing around sidewalk cafes must comply with the City of Richmond Sidewalk Cafe Ordinance.
- 8. City owned property will need to receive proper approvals.



Masonry with metal gate



Green wall



Masonry with metal gate



Branding opportunities on screening / fences



Evergreen screening



Evergreen screening

7.10 PUBLIC ART

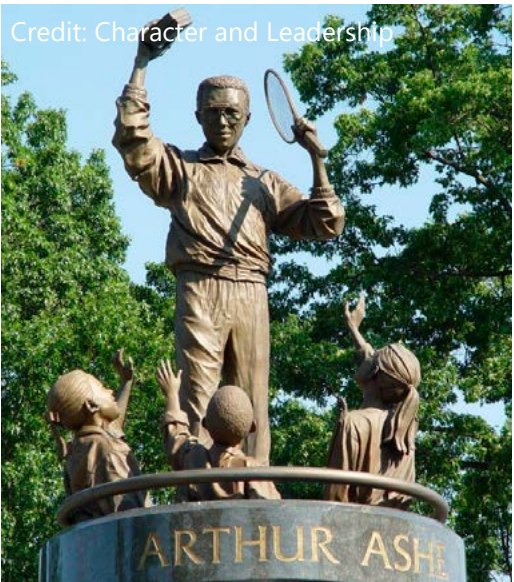
Public Art shall be approved by the community prior to installation. These Design Standards only cover the general character and extent of future public art installations. The integration of public art into every day life can help build a sense of place and pride in community by personalizing spaces and expressing community identity. The Public Art Commission, along with the Public Art Coordinator, administers the Public Art program for the City of Richmond, overseeing the selection and installation of public art that is funded through the City’s Percent for Art Program. The Public Art Commission does not typically fund community-initiated projects like road murals and neighborhood place-making installations or temporary installations on public property, but approval of the Public Art Commission for such installations is required.

Design Standards

1. In coordination with the family of Arthur Ashe, Jr., the developer shall develop and create elements honoring the legacy of Arthur Ashe, Jr., in each project phase. None of such elements shall constitute public infrastructure, and the developer shall be solely responsible for the costs of such elements.
2. As a part of each project phase, the developer shall dedicate one percent (1%) of the total development cost of the private development for such project phase to be applied to fund public art in such Project Phase, which may be on the private development but must be visible and accessible to the public. This shall be done in consult with the City of Richmond’s Public Art Commission in the development and implementation of the Developer’s public art program. If any public art is to be dedicated to the City, or if the public art is to be installed on City owned property, the developer shall comply with the Public Art Commission’s approval process for the creation of new public art
3. Art shall be provided over time at the entrance gateways, in the public space around the stadium, within and adjacent to the linear park.
4. Public art does not always need to be a centerpiece of a space. It can be subtle in nature. Seek opportunities to incorporate artistic elements to areas throughout the public realm, such as sculptural seating and planters, unique paving at significant areas, and at gateways.
5. Public art should be provided at a variety of scales and medias, to be experienced by both pedestrians and drivers, where possible.
6. If public art is to be permanent, maintenance and durability should be considered, particularly if the art will be exposed to the elements.
7. Public art must adhere to the principles laid out in the Public Art Master Plan.



Credit: Ramunas | Adobe Stock



Credit: Character and Leadership



Credit: Bay Area Discovery Museum



Credit: Alexander Denisenko | Adobe Stock

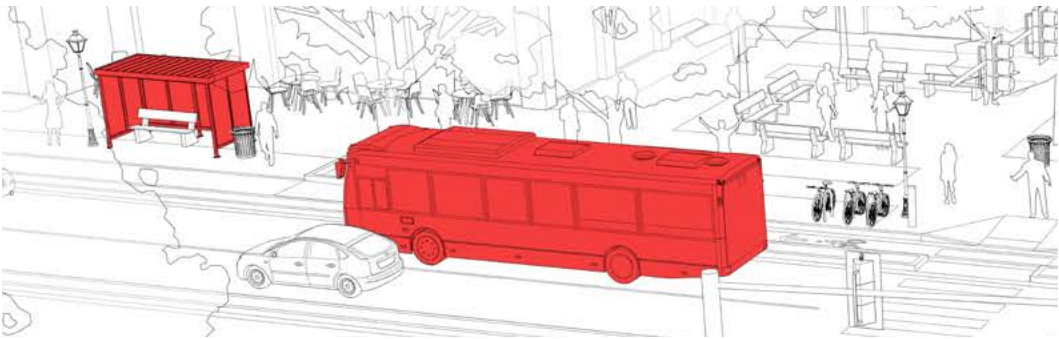


Credit: Eventbrite

7.11 ESSENTIAL TRANSIT INFRASTRUCTURE

Design Standards

- 1. All transit stops within the Diamond District shall include a transit shelter, seating, standard GRTC signage displaying route information, and a trash and recycling receptacle.
- 2. Standard GRTC 3-sided transit shelters shall be used.
- 3. Bus stop shelters require 6" reinforced concrete pads. Benches, trash cans and recycling receptacles may be bolted directly into standard 4" sidewalk.
- 4. Transit shelters and other transit related furnishing and amenities shall be located in the Buffer Zone of the sidewalk.
- 5. For high volume transit stops, additional seating should be located in close proximity to those stops either in the Buffer Zone or Frontage Zone.
- 6. Bicycle parking and wayfinding signage shall be located within close proximity to transit stops.
- 7. Areas around transit stops shall be well lit to provide greater visibility and safety at night.
- 8. Smart City technologies shall be incorporated into transit infrastructure, including real time route information as it becomes available.



Acceptable Transit Shelter Specifications:



3 sided GRTC transit Shelter, with advertisement space



3 sided GRTC transit Shelter

8 | APPENDIX A - EXISTING SITE IMAGES

The process of creating the Diamond District Public Realm Design Standards began with an extensive site walk with stakeholders to assess the existing site conditions and discuss a vision for the public realm. The following images of the existing site were taken by VHB during the site walk.



Sports Backers Stadium occupies a portion of the site, and is used year round by VCU, VUU, and other leagues and associations for soccer, track and field, and other athletics.



There’s no landscaping or street trees along Hermitage Road, and the edge of sidewalks have been overgrown with weeds.



Sports Backers Stadium features a track and soccer field.



Overgrown weeds and vegetation hides roadway and wayfinding signs from the street.



Existing parking lots are in poor condition.



No landscaping, edge treatment, or design code has been applied to the surface parking lot.



Sports Backers Stadium is well maintained.



Large surface parking lots are occasionally used for non-parking uses, including motorcycle and fire department training.



Power lines running along the existing street limit the growth potential of street trees.



Fencing located along the road edges separates the sidewalk from private properties.



Existing trees that are set back from the road edge and power lines are larger and healthier.



Lack of street trees, dedicated bike lanes, on street parking, and landscaping.



Existing pedestrian crossings include a CG-12 diagonal variation curb ramp and painted crosswalks on asphalt.



Existing bus stops currently have no shade or rain protection. No bus pullouts are provided.



There are no street trees, edge treatment, or markings present on existing roads within the site.



Formal landscaping is minimal and unattractive.



A lack of overhead power lines along adjacent streets allow street trees to grow larger and healthier.



Existing street trees struggle to grow do to the small planting beds and overhead power lines.



Street trees are trimmed back below power lines, resulting in stunted growth.



Existing bus stops are uninviting, with no covered canopies or seating.



Medians have no landscaping or trees, resulting in a poorly maintained lawn.



Piecemeal site planning and lack of maintenance has resulted in poor sidewalks, landscaping, and site experience.

9 | APPENDIX B -
CASE STUDIES













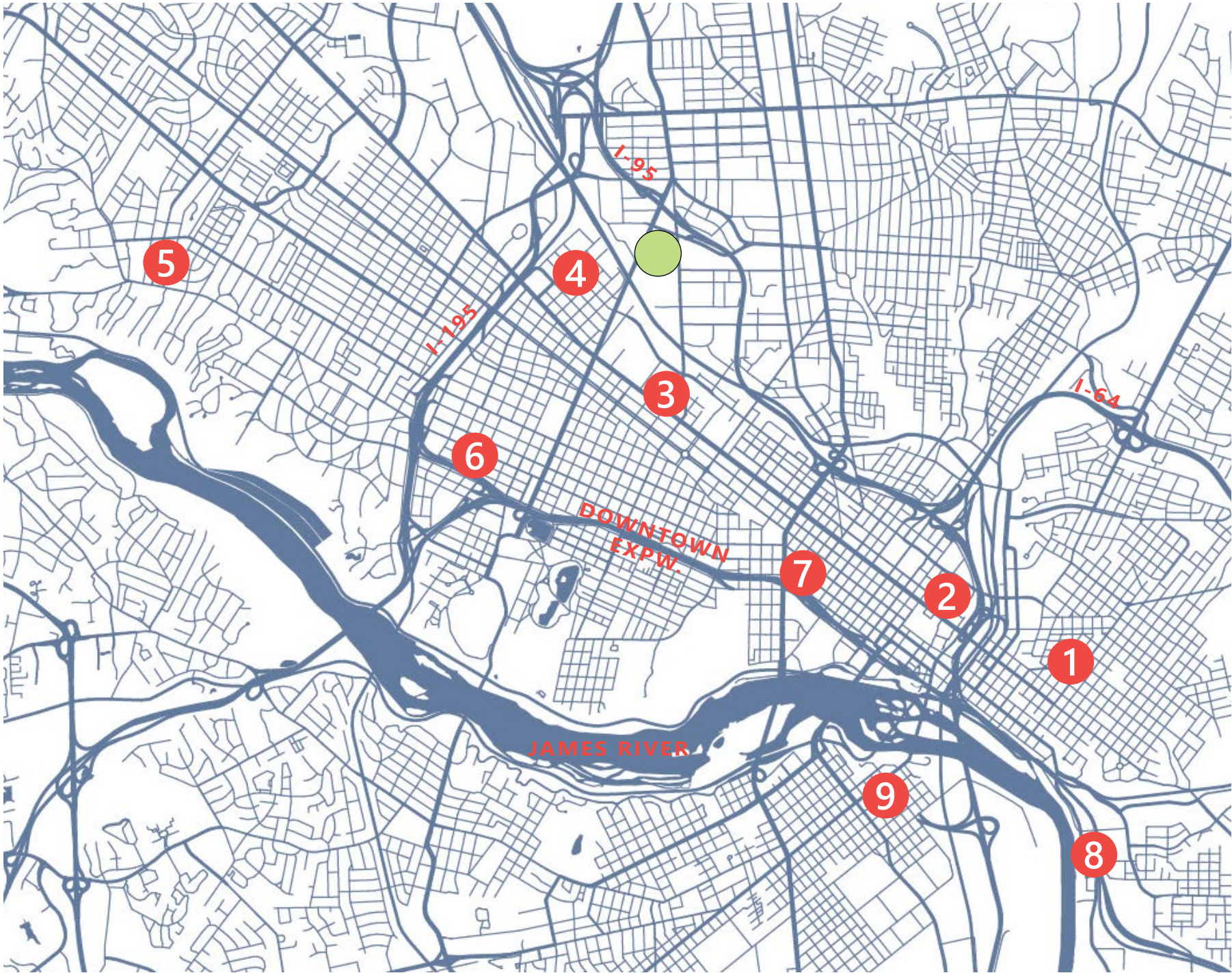
9.1 INTRODUCTION

A review of the City of Richmond’s existing streetscapes was done to better understand the elements that make streets successful. The case studies were taken from six areas of Richmond to best understand the varying character and elements throughout the city.

Elements including street materials, site furnishings, sidewalk widths, and street plantings were analyzed. By incorporating successful streetscape elements used in the City, and avoiding those things that are less successful, the Diamond District can seek to provide streets that respects Richmond’s historic character, while creating its own unique character.

Time was spent at each of the six locations observing and analyzing each streetscape. Streetscapes were documented with photos and a narrative as well as a summary of key lessons learned.

-  Diamond District Site
-  Church Hill
-  Downtown
-  Sauer Center
-  Scott’s Addition
-  Westhampton
-  Carytown
-  VCU Main Campus
-  Rocketts Landing
-  Manchester



9.2 CHURCH HILL

Church Hill is one of Richmond’s Historic Districts, with streetscape features including herringbone brick pavers, ornamental street lighting, and mature street trees.



A lack of maintenance has caused Church Hill sidewalks to have cracks, moss, and weed growth.



Existing intersections have white block style crosswalks, traffic lights, overhead power lines and poles.



Pedestrian crossings are split to align with the parallel sidewalks. These two curb ramp crosswalks are the City of Richmond’s new standard.



Crosswalks through Church Hill are predominantly white block style painted asphalt, also an emerging city standard.



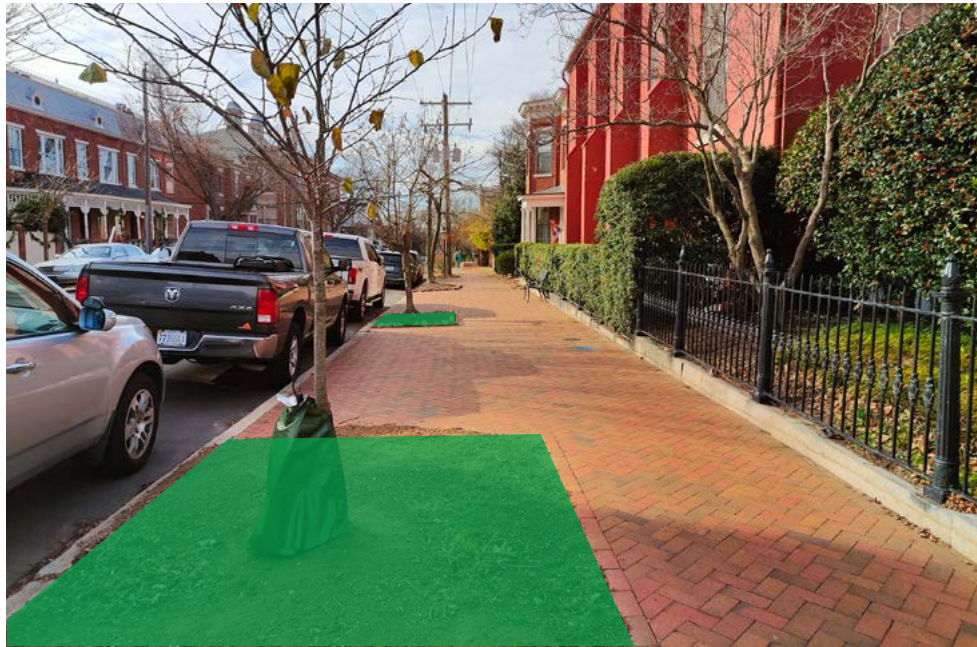
Herringbone brick sidewalks define the character of Church Hill, and are also predominant throughout the City of Richmond as a distinctive character.



Coffee shops spill out onto the sidewalk (blue), with seating on both edges of the pedestrian circulation. This reduces the size of the Pedestrian Travel Zone (orange).



The existing lights throughout Church Hill are of a historic design, with glass chambers and decorative posts and bases.



The width of the Buffer Zone varies throughout Church Hill, reducing consistency of the neighborhood streetscapes.



Community members have personalized the street character through added decorative features.



There is a clear definition between the Frontage Zone, the Pedestrian Travel Zone, and the Buffer Zone throughout many typical streets.



Brick pavers are used in multiple places throughout the streets, including borders, accent bands, and main thoroughfare routes.



Larger, historic trees have caused the existing pavers to move do to the growth of the tree root system.

CHURCH HILL (continued)



Planting beds with shrubs throughout Church Hill are often customized by community members.



Newly developed apartments maintain the typical Church Hill streetscape. The wider Pedestrian Travel Zone removes the presence of any Frontage Zone.



Pedestrian crossings are currently a CG-12 ramp and white block style painted asphalt.



Middle islands within intersections possess low shrubs and groundcover and no trees.



The existing bus shelter offers a canopy for shade or rain. The shelter is subject to graffiti or stickers.



Cobblestones are periodically used as an accent material throughout Church Hill for vehicle calming and aesthetics.



Street lights are designed to enhance the historic nature of the community. Bus stops match the posts and design through the City of Richmond.



A lack of maintenance has caused tripping hazards and a poor surface for wheelchair users.



Overhead power lines and poles are evident throughout most Church Hill streets, limiting the growth and choice of street trees.



Multiple poles are evident, creating a cluttered streetscape.

Key Findings and Considerations

- A maintenance program should be installed by the City of Richmond for general streetscape upkeep
- Pedestrian crossings are white block style painted asphalt
- Sidewalk zones to be clearly distinguished through design
- Historic lighting fixtures to be respected and considered
- Separate brick pavers from street trees to avoid roots affecting sidewalks
- Provide a varied, interesting street character
- Use a mix of materials, including brick pavers, concrete and cobblestone
- Streamline design to reduce streetscape "clutter"
- Encourage overhead utilities to be located underground to improve streetscape and increase street tree growth
- A basic level of maintenance may be expected; however, DPW will be limited in higher than basic services
- Crosswalk markings at signalized intersections are ladder style. At controlled crossings where a gap survey allows crosswalks, transverse only style is permitted.

9.3 DOWNTOWN (N. 12th St. between E. Broad St. & E. Marshall St.)

Recent Downtown projects exhibit design features that should be considered in future development within Richmond, including bike lanes, material changes, and matching street furnishings.



Pedestrian crossings include a concrete border and a herringbone brick paver pattern.



Designated bike lanes are separated from the vehicular travel lanes through traffic bollards.



The City standard bench, Victor Stanley's RB-28, is used throughout new Downtown projects.



The trash receptacle matches those in other City Neighborhoods, with slight variance to the design.



Bollards are painted black to match adjacent site furnishings. Their design varies throughout City Neighborhoods.



Street furnishings are painted to match surrounding street and building character. A plaza design and cafe table seating offers seating to users near the street.



Light fixtures are designed to match Richmond's historic character, with glass lantern boxes and decorative light poles.



Manholes and utilities are located in the center of the sidewalks for quick access, but do not blend with the surrounding materials.



Corten steel is used for storm drains to offer a unique aesthetic to the streetscape.



Mass sidewalk areas are design with herringbone brick pattern pavers to match other historic districts.



Tree wells located along 14th street are designed for stormwater capture, yet poor design and maintenance results in dangerous element for pedestrian users.

Key Findings and Considerations

- Sidewalks are predominantly brick pavers in a herringbone pattern
- Utilities within the streetscape should be screened or designed accordingly with the street design
- Utilize changes in materials to denote sidewalk crossings or other points of interest
- Respect the historic character of Richmond's site furnishings
- Create spaces within the streetscape for users to sit and stay
- Encourage the use of separated bike lanes for safety of all users
- Tree wells and other site elements to consider the pedestrian and their safety

9.4 THE SAUER CENTER

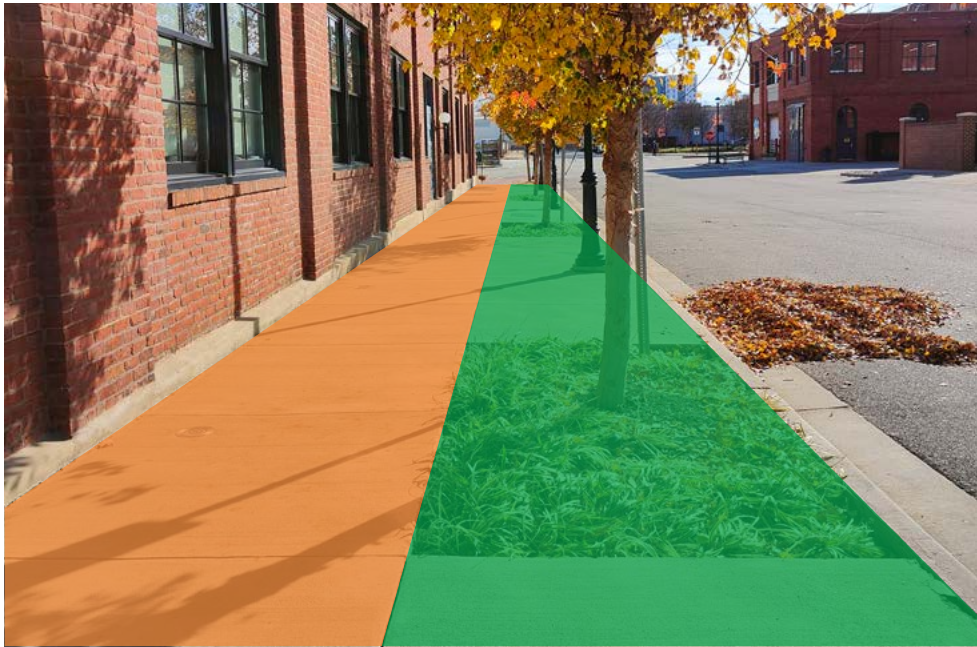
The Sauer Center project is a recent development adjacent to the Science Museum, located off W. Broad Street. The project respects and considers Richmond’s historic character, while offering a modern touch through design.



Concrete is used for aprons through the Sauer project, offering a different material for pedestrian crossings, and speed of road delineation.



Street tree wells correspond with the score lines of the concrete. Trees and low groundcover are both planted within the wells.



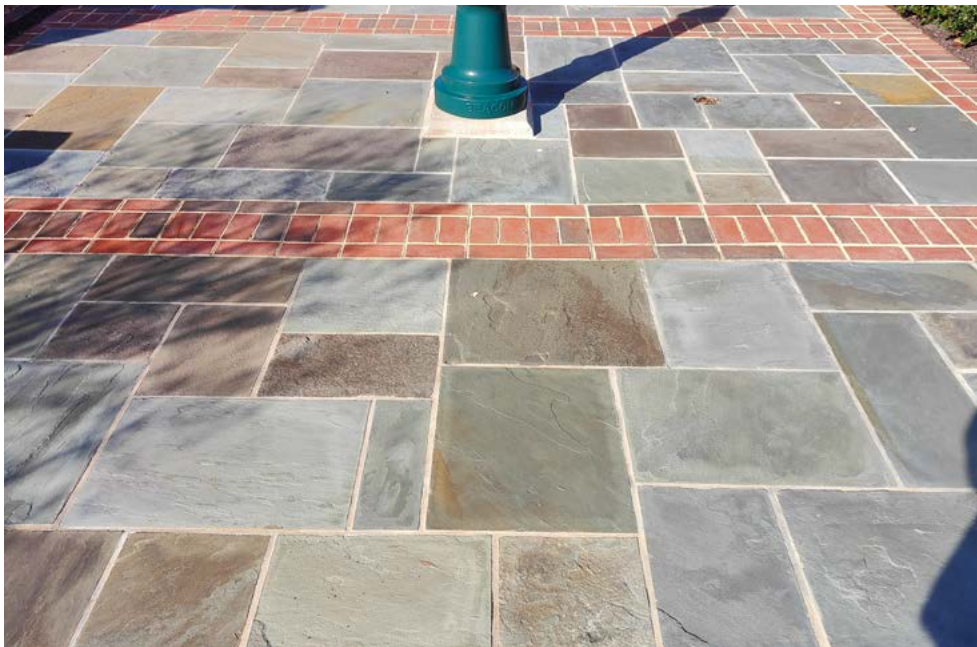
Narrower sidewalks are designed to offer a clear Pedestrian Travel Zone, a defined Buffer Zone, but no Frontage Zone.



Different materials and patterns are used to provide a unique design at intersections, plazas and points of interest.



Decorative art installations throughout the project help with pedestrian wayfinding and offer visual points of interest.



Bluestone and brick pavers are used simultaneously to offer a variety in sidewalk design, and distinguish between plazas and sidewalks.



Street fixtures throughout the project reflect the historic nature of Richmond's typical light, while offering a modern element with LEDs.



Plazas offer seating and small enclosures through walls and changes in elevation.



Electric car charging stations are provided throughout the project, increasing the likelihood of users to the site.



Steps and staircases are constructed with brick pavers to match and respect the surrounding built environment.



Different materials are used at junctions and pedestrian crossings to distinguish between vehicular and pedestrian zones. Detectable warnings visually match the surrounding design.



Bollards on site match Richmond's historic and traditional character, with grooves and a decorative top.

9.5 THE SAUER CENTER



Fire hydrants on site are located within the Pedestrian Travel Zone (orange), reducing the width of the walkway for pedestrians.



Traffic light signal poles are designed to match the site furnishings through the project, including color and detailing.



Pedestrian crossings are constructed with brick pavers and concrete borders to differentiate against the asphalt.



Decorative trench drains are designed to match the theme and design of the surrounding project.



Large street trees are located along the street frontage, equally spaced to offer tree canopy cover and visual interest.



A clear delineation between the Frontage Zone (blue), Pedestrian Travel Zone (orange) and Buffer Zone (green).



Light poles and trash cans are chosen to match the historic character of Richmond, with a matching color scheme.



Sidewalks are predominantly scored concrete, with a change of material to reflect a point of interest.



Larger planting beds and tree wells are under planted, resulting in large areas of mulch.



Detectable warnings visually match the surrounding character and warn users of a pedestrian crossing.



Granite curbs used for street tree wells offer visual interest, and a raised physical border to the planting beds.

Key Findings and Considerations

- Create nodes through public plazas and green spaces for wayfinding and gateways
- Utilize changes in materials to denote changes in spaces and vehicle spaces
- Respect Richmond's historic character and street furnishings design
- Use ornamental and unique design features to denote the project identity
- Clearly distinguish between the Frontage Zone, The Pedestrian Travel Zone and The Buffer Zone through design
- Encourage green spaces for the user
- Consider the integration of electric charging in the design
- EV Charging is not within the public right-of-way

9.6 SCOTT'S ADDITION

Scott's Addition exhibits new projects that possess design considerations for any future development, including the Science Museum of Virginia redevelopment and the Otis Apartments.



Projects outside of the Public right-of-way have site furnishings to closely match the traditional Richmond bench design.



The Pedestrian Travel Zone (orange) is clearly distinguished by the street furnishings located inside the Buffer Zone (green) and a lack of obstructions in the walkway.



Benches located within the right-of-way match the character throughout the city, with variance in the color.



Trash receptacles and street poles reflect the historic character and furnishings around Richmond.



Large street trees are located along main thoroughfare streets, with light poles equally spaced for continuity.



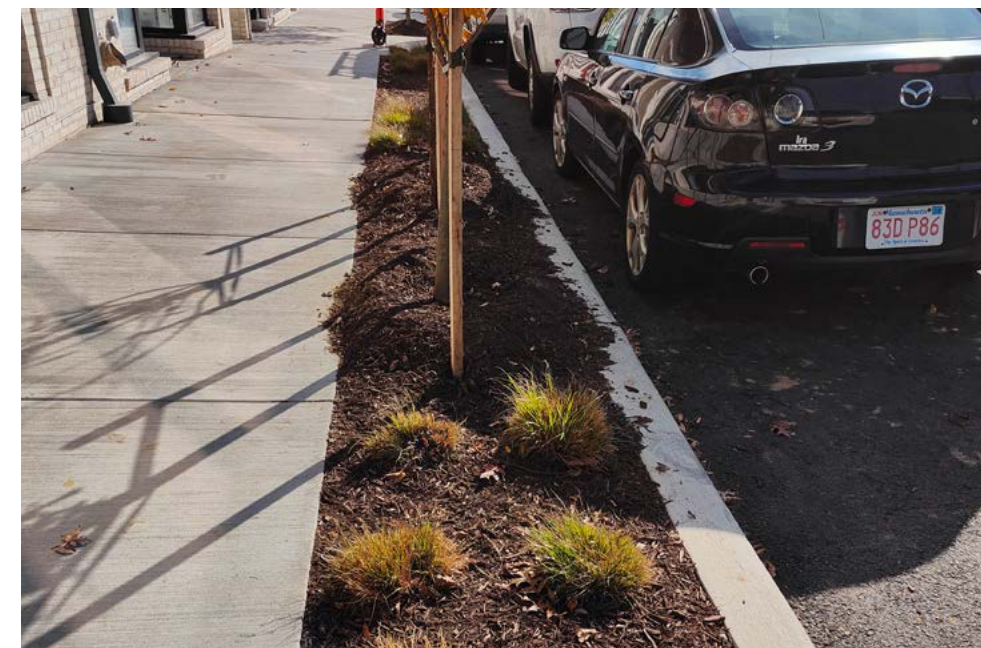
Streetlights along main thoroughfare routes have two fixture heads for both traffic and pedestrians.



Continuous and long planting beds result in difficulty for the driver to exit their vehicle safely.



Overhead utilities along the street limits tree growth, allowing only ornamental trees or no trees.



Narrow, continuous planting beds and poor maintenance leads to mulch spillage on the road and sidewalk.



A clear delineation between the Pedestrian Travel Zone and the Buffer Zone however, the Frontage Zone is not clearly marked.



Difficult to identify public and private property from a lack of material diversity.

Key Findings and Considerations

- A clear delineation between the three sidewalk zones, including through changes in material or elevation
- The effect of continuous planting beds along streets for parallel parking
- The appropriate considerations for powerlines, and adjacent planting
- Street furnishings design to match Richmond's historic character
- Wider sidewalks for large volume of pedestrian traffic

9.7 WESTHAMPTON

Westhampton has experienced recent redevelopment, with projects that exhibit notable design changes, including choice of site materials, and design through landscaping.



Pet waste stations, light poles and wayfinding signs are located within planting beds to avoid obstacles in the Pedestrian Travel Zone.



Frontage Zones and the Pedestrian Travel Zones are clearly distinguished through an evergreen hedgerow and elevation change.



An evergreen hedgerow and planting within the streetscape softens the surrounding hardscape.



All three sidewalk zones are clearly distinguish through the use of furnishings, planting, and a change in concrete scoring.



Utilities located along in streets are inadequately screened from the road or sidewalk.



Ornamental trees are located underneath overhead utilities.



Bollards with LEDs do not match the standard, traditional bollard throughout Richmond.



Concrete stairways and steps match the surrounding area, and strongly contrast to the adjacent brick walls.



Handrails are powder coated black tube for a traditional, Richmond look.



The Buffer Zone is clearly distinguished by a change in score line pattern.



Utilities along the road are not screened, and obstruct users of the sidewalk.



CG-12 ramp located at existing intersections.

Key Findings and Considerations

- Locate street furnishings and utilities out of the Pedestrian Travel Zone, in landscaping to avoid obstacles for users
- Consider a difference in material and/or design to distinguish the change in sidewalk zone
- Use elevation change and landscaping to separate public and private
- Create a consistent furniture look and design throughout the project
- Combine a mix of concrete and brick to match Richmond’s character
- Use ornamental trees under powerlines

9.8 CARYTOWN & VCU MAIN CAMPUS

Carytown streetscape demonstrates a mix of positive and negative streetscape features that should be considered. The VCU area highlights design features that can be utilized for future development.



Poor maintenance has resulted in spreading mulch beds, cracked mossy sidewalks, and weed growth.



A lack of street trees and delineation from the Frontage Zone and the Pedestrian Travel Zone on side streets results in a poor streetscape.



Raised traffic islands with a gutter allows for water movement but design could be adjusted to allow for large landscaping areas.



Wide sidewalks allow for large volumes of traffic.



Cobblestone has been used as an accent in the planting beds for visual interest.



A lack of street trees and maintenance results in a poor streetscape for site users.



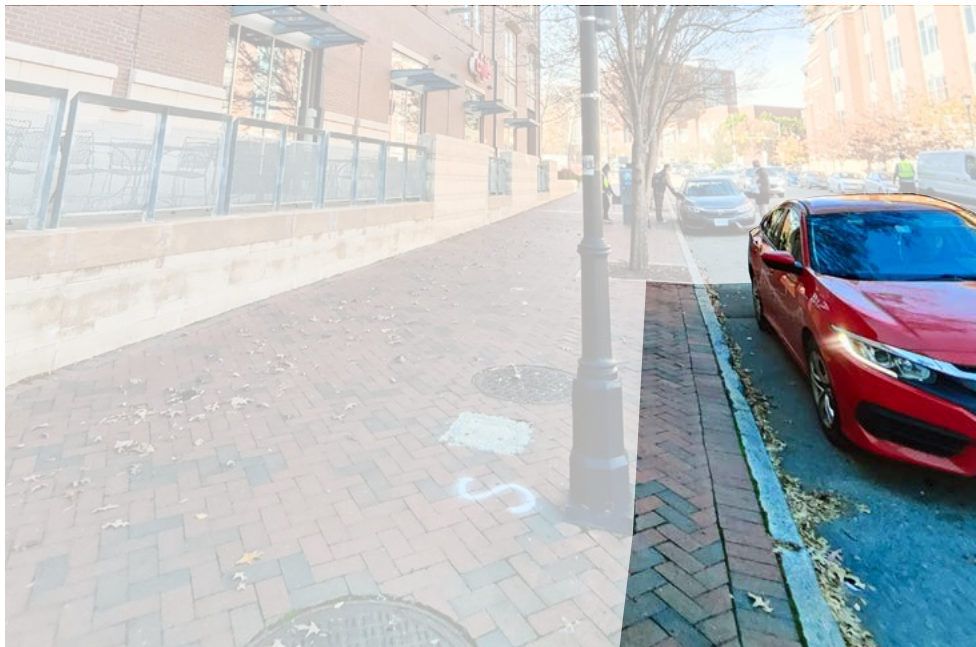
A wide pedestrian sidewalk with smaller tree wells are suitable for larger volumes of pedestrian traffic.



The planting bed setback from the road edge allows for a larger planting area and a ease of access for drivers exiting / entering their vehicles, but collects debris and is a tripping hazard.



Storm drains are decorative metal which offers visual variety from the typical Richmond storm drain.



A lack of obstacles along the main road allow for easier access for street parked cars.



Pedestrian crossings are white ladder style with no change in elevation or material.

Key Findings and Considerations

- A maintenance program should be installed by the City of Richmond for general streetscape upkeep
- Avoid the design of streets with no landscaping or street trees
- Use a change of material for planting beds and tree wells
- Encourage more planting and larger planting beds where applicable
- Setback planting beds from the curb to reduce impact on parallel parking
- Use ornamental storm drain designs to provide visual interest

9.9 ROCKETTS LANDING

Rocketts Landing is a recent development that offers multiple positive elements to analyze to create a successful streetscape. Due to the project’s infancy, Rocketts Landing also highlights elements that the City of Richmond prefer today.



Sidewalks in Rocketts Landing are predominantly brick pavers in a herringbone pattern.



Crossings include concrete CG-12 and a concrete apron to distinguish between thoroughfare roads and side roads.



Design elements, such as columns, elevation change and landscaping create a clear delineation between each sidewalk zone.



Sidewalks, stairs and ramps are all brick pavers for a consistent look, with black handrails to match architectural elements.



Tree wells are set back from the curb to allow for unobstructed access from the car, with periodic paver sections for pedestrian access.



Utilities are located within the Pedestrian Travel Zone, with no screening, resulting in obstructions for users.



Site elements, including site lighting and stop signs, are painted in the same color for consistency in the development.



Elevation changes indicate a difference between public and private property, but has consistency through materials.



Landscaping and planting beds clearly distinguishes between the Buffer Zone, the Pedestrian Travel Zone and Frontage Zone.



Continuous planting beds make it difficult to exit the car. Low groundcover offers visual variety with street trees.



Crosswalks are brick pavers in a herringbone pattern with a concrete edge to distinguish against the asphalt drive.

Key Findings and Considerations

- Use a mix of pavers and concrete for visual variety and to distinguish between zones.
- Consider elevation and material changes to aid navigate the site users.
- Use planting beds and landscaping to clearly delineate between public, private and the sidewalk zones.
- Consider the pedestrian and car user when designing planting beds and sidewalks.
- Use a consistent theme and design palette throughout the development.
- Use a mix of planting material to provide visual interest.
- Highlight pedestrian crossings through a change of material or design.

9.10 MANCHESTER

Manchester is a case study that offers insights for a high density area of the City with apartments and high volume sof traffic. Manchester has its own unique theme that should be analyzed.



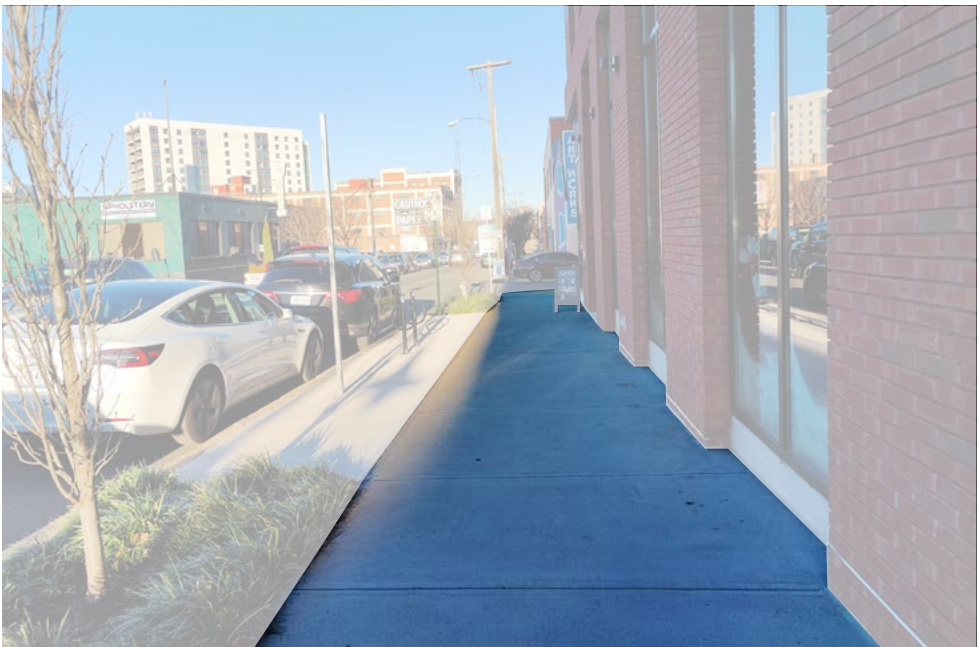
No changes in sidewalk material or score pattern makes it difficult to distinguish between the Frontage Zone (blue) and the Pedestrian Travel Zone (orange).



A change of material helps identify a change from sidewalk to public plaza.



Tree wells are well maintained, with no spillage and healthy groundcover and tree growth.



Wide sidewalks allow for passing and large volumes of traffic.



A variety of bicycle racks are installed, all in the same color



There is little distinction between the zones of the sidewalk, but sidewalks are sufficiently wide.



Light fixtures around the development are of similar design, creating continuity throughout.



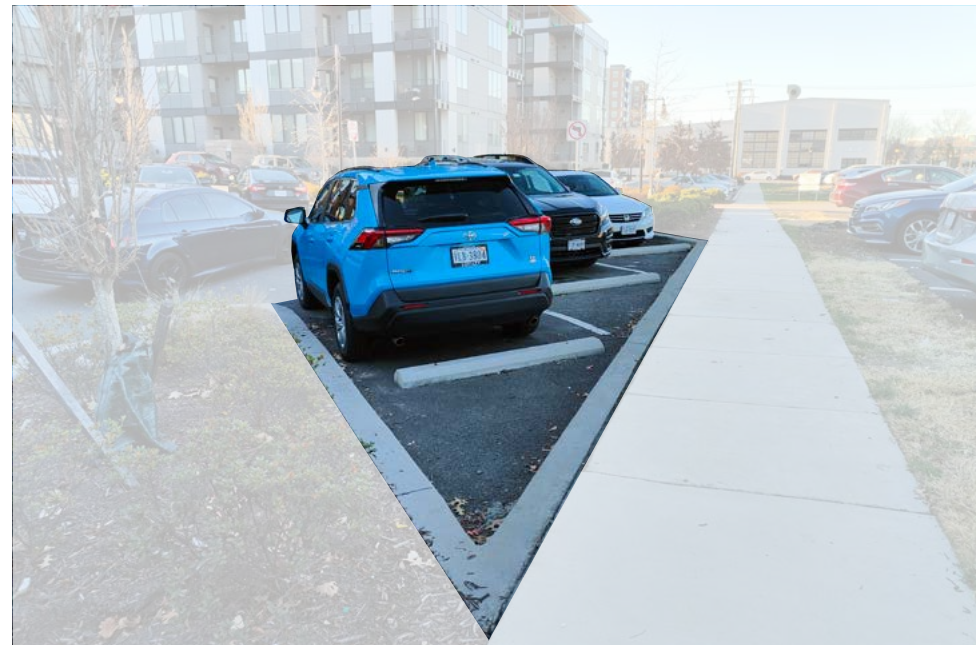
Concrete scores lines are constructed with a flat border for visual variety throughout the development.



Electric scooters used throughout Richmond are stored within the Buffer Zone (green). Consideration should be given for designed storage.



Pedestrian crossings are white block styles with lowered detectable warnings for all site users.










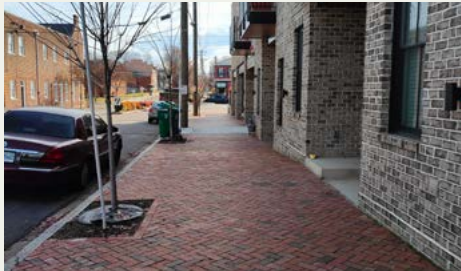




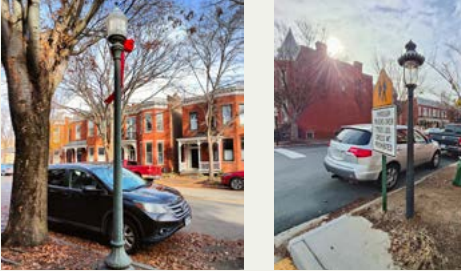


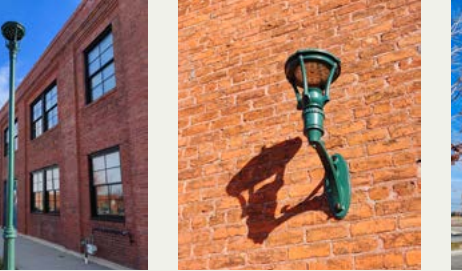


Parking within Manchester includes parallel and angled parking to allow for faster access for site users.

Key Findings and Considerations

- A maintenance program should be installed by the City of Richmond for general streetscape upkeep
- Avoid the design of streets with no landscaping or street trees
- Use a change of material for planting beds and tree wells
- Encourage more planting and larger planting beds where applicable
- Setback planting beds from the curb to reduce impact on parallel parking
- Use ornamental storm drain designs to provide visual interest

9.11 RICHMOND CASE STUDIES
SUMMARY OF FINDINGS

Category	Site Element									
Sidewalk Zone										
	Wider sidewalks accommodate higher volumes of traffic				A mix of materials can align with development theme		Scoring can be used to differentiate between sidewalk and Frontage Zone		Wide sidewalks clear of clutter accommodate high volumes of traffic	
										
	Dining in the Buffer Zone obstructs the path of travel				No clear distinction between sidewalk and Buffer Zone.		Bike / scooter parking is often located within Buffer Zone		Architectural features and planting bed defines sidewalk	
									A lack of a defined Buffer Zone results in a barren streetscape	
Sidewalk Zone										
	Frontage Zone defined by vegetation and elevation change				Buildings set back from sidewalk allow for planting in Frontage Zone		Larger Frontage Zone provides different streetscape		Street trees equally spaced along road length	
									Varying street well sizes results in varied streetscape character	
Site Lighting										
	Lighting fixtures within historic districts are of acorn design				The predominant lighting fixture through the City of Richmond is the ornamental fixture, painted black		Recent projects in Richmond include a variation on the traditional fixture design, with LEDs and painted a dark green			

All images by VHB

Category

Site Element

Site Furnishings



Bike racks vary in design but are predominantly black in color



Bike racks designs include loops and rings



Bollard design varies but mostly matches the pole light design



Site furniture located outside of the main sidewalk



Older neighborhoods do not possess the latest transit shelter



The City standard bus stop sign



Trash cans in new developments match older neighborhoods



Throughout the city, the same designed trash can is used



The slatted site bench is the most predominant in the city



The slatted design has variation but possesses the same theme

Intersections and Crosswalks



Pedestrian ramps are concrete ramps, with concrete aprons



Pedestrian crossings in Manchester are painted asphalt



Various sites throughout the city have brick paver crosswalks



Downtown also possess white painted asphalt at junctions



Brick pavers with a herringbone pattern and concrete border

Utilities



Utilities are located within the sidewalk as an obstacle



Utilities in the sidewalk rarely have screening



Ornamental grates offer variety to the standard inlets



Utilities rarely match the surrounding hardscape



Powerlines reduces the possibility for large street trees

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Category

Site Element

Maintenance



Large street trees have uprooted brick pavers



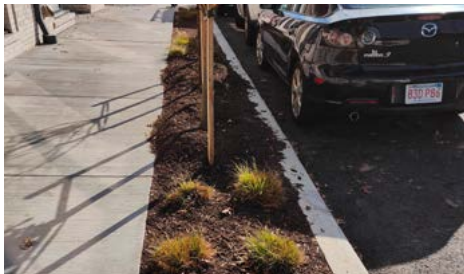
Tree wells have overgrown sidewalks



Uprooted brick pavers from tree roots



Overgrown ground cover spills onto the sidewalk



A lack of maintenance has caused mulch to spill

Roadway Elements



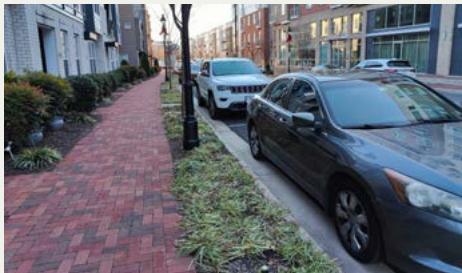
Low planting can create a buffer between pedestrians & vehicles



No clear distinction between sidewalk and Buffer Zone.



Buffers between bike lanes and vehicular traffic is often minimal

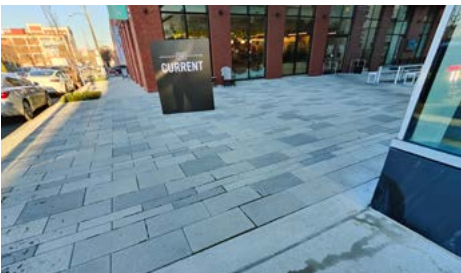


People existing cars have to step over vegetation in planting strip



Tree wells are often long enough to hold more than one tree

Materials



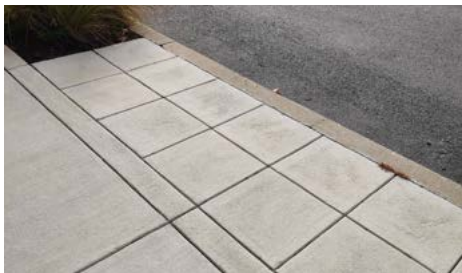
Clean lines and neutral grays allow other elements to pop



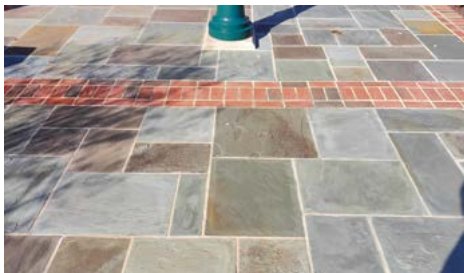
Brick is a predominate material used for Richmond sidewalks



Vast brick sidewalks really need variation of color and pattern



Variations in scoring patters can add interest to concrete



Variations in materials and patterns can add visual interest



Concrete sidewalks allow plants and site furnishings to be visible



Changes in texture can add interest to concrete sidewalks



Concrete with no scoring or change in texture can be dull



In addition to brick, cobblestone is also a predominate material



Varying street well sizes results in varied streetscape character

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